

## INTRODUCTION

The purpose of this report is to provide an addendum to the Historic Structures Report Architectural Data Section on the Brawner Farm House, or Douglas Hall, at Manassas National Battlefield Park, Manassas, Virginia. This work was completed at the request of the Planning Division of the National Capital Regional Office. The principal goal of the research was to develop information on the condition and evolution of the structure as it relates to the Park legislative mandate to interpret the events of the 1st and 2nd battles of Manassas, and to provide this information to the Development Concept Plan (DCP) Team for the Brawner Farm.

In April and May of 1987, the Williamsport Preservation Training Center (WPTC) conducted an architectural fabric investigation on the structure. Architectural evidence was evaluated in an attempt to determine:

- 1) The evolution and sequence of construction of the existing building.
- 2) The probable appearance of the structure c. 1862, in the context of the 2nd battle of Manassas.

On July 8, 1987, a meeting was held at the site to present the preliminary results of the archaeological investigation conducted by the National Capital Region under the direction of Regional Archaeologist Stephen Potter. This information has been integrated with the results of the architectural investigation in the development of alternatives for treatment considered in this report.

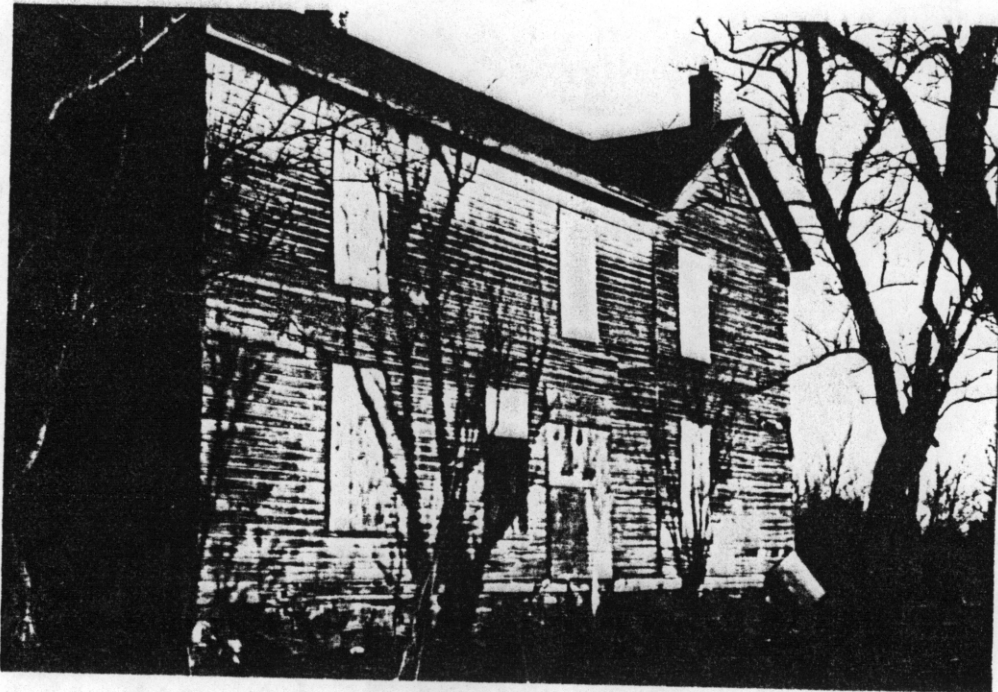
### EXISTING CONDITIONS

The structure in a 2 1/2 story "L" shaped building located on RT 29/211, approximately two miles west of the intersection of RT 234 and RT 29/211. It is situated at the top of a knoll, approximately 1/4 mile from the highway. The site includes the principal structure and several 20th century farm outbuildings.

For the descriptive purposes of this report, the building will be considered in two sections, A and B. Section A comprises the shorter leg of the "L", with its principal axis running approximately East/West. Section B is a 20th century addition, making up the longer leg of the "L".



No. 1 Section A, Northeast Corner



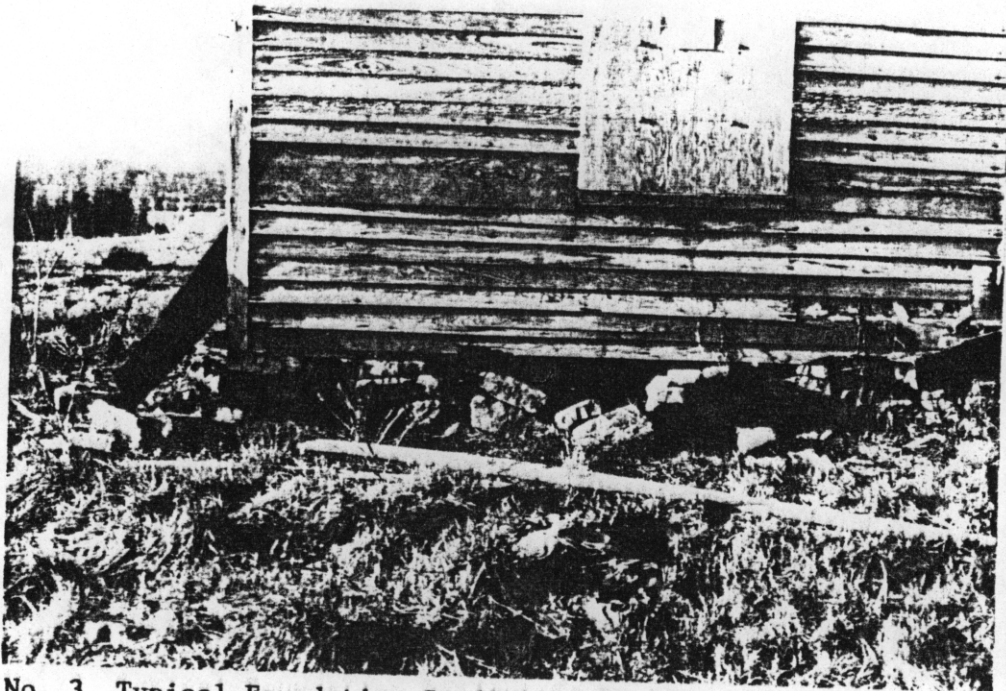
No. 2 Section B, Southeast Elevation

#### Foundations

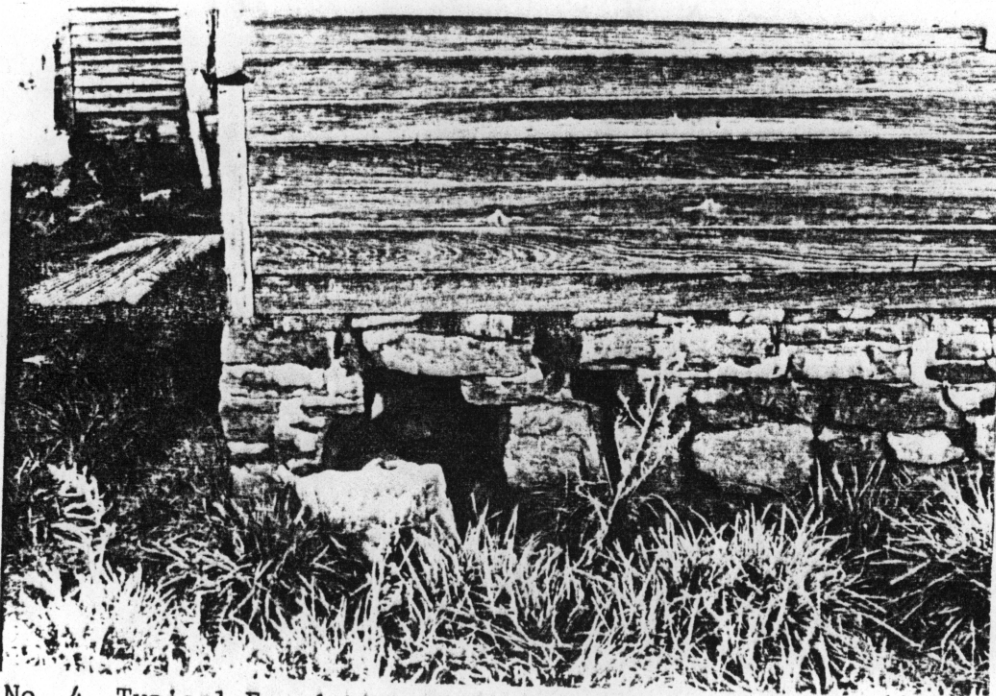
The foundation of Section A is constructed of random coursed, dry laid field stone. It is continuous with the perimeter of the Section A structure and shows no evidence of significant alterations.

The foundation under Section B, is constructed of mortared field stone, and is butted against the foundation of Section A. A partial basement exists under Section B. The basement extends the full width and approximately 2/3 the length of the wing. A date "1916" with the initials "J.P.A." is scratched into the pargeted concrete wall. The excavation of the basement may post-date construction of the wing.





No. 3 Typical Foundation Condition, Section A



No. 4 Typical Foundation Condition, Section B



### Framing (Section A)

The construction of Section A represents two distinct phases of building activity, and incorporates isolated, nonstructural elements from a third, distinctly earlier, building period. From the second floor plate down, the structure is a braced timber frame characterized by hand hewn sill plates and corner posts, with vertically sawn studs, joists, and knee braces, mortise and tenoned at framed joints. Water or steam powered vertical saw mills were the predominate method of manufacture of framing lumber from c.1830-1870, before the general use of circular sawn material, however, vertical saw mills continued to operate in many areas through the end of the 19th century. Nailed connections throughout the structural frame employ machine made cut nails of a type generally used after 1835. The voids between the studs contain remnants of mud and straw infill used as insulation.

Several unusual and/or noncontextual features are evident in the braced timber frame. The west elevation was constructed without knee braces at the corner posts. A single through dovetail mortise is cut into the south elevation second floor plate, with no evident reference to another member. At the east and west elevations the sill plates are joined at midspan with a half lap joint. This suggests possible reuse of materials.

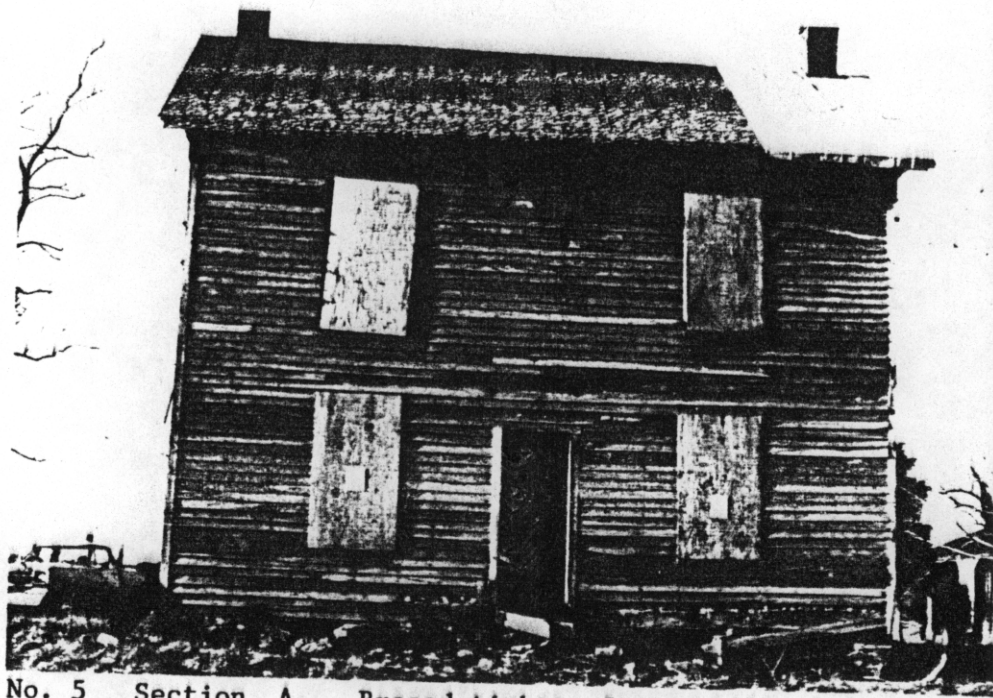
At the second floor plate, the vertical sawn ceiling joists are notched through the plate. At the junction of Section A and Section B, three ceiling joists overhang the plate and exhibit nail patterns indicating cornice, soffit, and rafter plate locations. From the second floor plate up, all lumber for studs, ceiling joists, rafters, plates, and sheathing are dimensioned circular sawn lumber of 20th century manufacture. This evidence indicates that the structure existed as a 1 1/2 story building until the early 20th century when a full second story was added. No evidence was found relating to the pitch or roofing material of the 1 1/2 story structure.

### Framing (Section B)

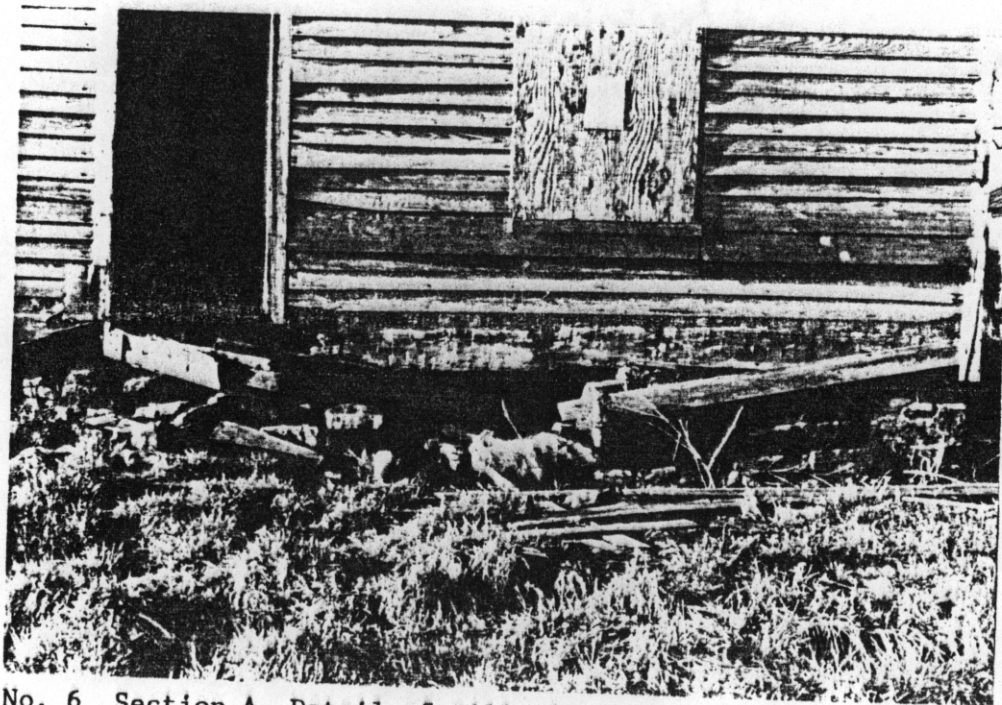
The sill plates of Section B are hand hewn, squared timbers, with dimensioned circular sawn studs mortised in. The remainder of the framing lumber for joists, studs, rafters, and roof sheathing is dimensioned, circular sawn lumber. The framing of Section B is consistent with and integral to the construction of the second story of Section A.

### Exterior Envelop

All existing windows in Sections A and B are 2/2 double hung wood sash, with the exception of a single 6/6 double hung window on the south elevation of the second floor of Section A. All window



No. 5 Section A, Braced timber frame, sill plate and second floor plate visible



No. 6 Section A, Detail of sill plate



IN REPLY REFER TO:

# United States Department of the Interior

## NATIONAL PARK SERVICE

DSC-Eastern Team

Williamsport Preservation Training Center

205 West Potomac Street, P.O. Box 106

Williamsport, Maryland 21795

H30

# DRAFT

### Memorandum

To: Outdoor Recreation Planner, Denver Service Center

Through: Chief, Williamsport Preservation Training Center,  
Eastern Team, Denver Service Center

From: Exhibits Specialist, (Trainee), Williamsport  
Preservation Training Center, Eastern Team, Denver  
Service Center

Subject: Results of Fabric Investigation and  
Alternative Preservation Treatments of Douglas Hall,  
Manassas NBP

A fabric investigation of Douglas Hall was conducted between 4/1/87 and 5/30/87, by the Williamsport Preservation Training Center. The center was requested, by the Planning Division, National Capital Region, to conduct the investigation, and to provide information concerning the existing structure for the Brawner Farm Development Concept Plan (DCP) Team.

The existing structure was examined for: 1) Evidence of historic period fabric that relates to the Battle of Brawner Farm 2) architectural details as relate to historic period construction and 3) sequence of construction of existing building.

The construction sequence and supporting evidence will be outlined in this report. A list of alternative treatments is included, with comments on the feasibility of each alternative.

#### Existing Structure

The present structure is a 2 and 1/2 story " " shaped building located on Rt. 29/211, approximately two miles west of the intersection of Rt. 234 and Rt. 29/211. The structure sits atop a knoll, overlooking Rt. 29/211 and sits among several farm outbuildings.

For the descriptive purposes of this report, the building has been divided into two sections, A and B. All descriptions will refer to the two sections. Room numbers were also assigned during the investigation and will be used for descriptive purposes. (See attached drawing)



## Description of fabric evidence

### Foundation & Cellar

The foundation under section A, was constructed of dry laid, field stone, in a haphazard fashion, and shows no evidence of significant alterations. No evidence of foundation piers was discovered. Based on this evidence, it appears that the foundation under section A, was constructed when the sill timbers of Section A were set.

The foundation under section B, is constructed of mortared field stone, and is butted against the foundation under section A. A basement with walls of unknown construction material, but pargeted with concrete exists under section B. The basement extends the full width and approximately 2/3 the length of Section B. A date, "1916" with the initials "J.P.A." is scratched into the concrete pargeting in the basement. The foundation shows no evidence of significant alterations. Based on this evidence, it appears that the foundation was laid when Section B of the house was constructed. The basement was either dug at the time the foundation was laid or shortly there after.

### Framing (Section A)

The first floor exterior walls of section A, are constructed with ratchet driven, vertical sawn studs and braces and dimensioned circular sawn infills. (Any reference to a ratchet sawn framing member will denote one that was cut from a tree that was hewn square in the forest, and carried to a vertical saw, ratchet driven mill for cutting into smaller rafters and joists. This technique of sizing lumber was used commonly before 1850, but could have continued until the use of circular saw mills became popular/feasible. The technique of sizing timber to standard dimension lumber with a circular saw came into common use in the late 1870's.) The dimensioned stud infills are fastened with cut nails and support the present siding and windows. (The cut nails are machine made cut nails. These nails came into common use in the late 1830's.) 40% of the spaces between the ratchet sawn studs is infilled with mud and straw.

Several construction oddities were discovered. The west elevation first floor timber framing of section A was fabricated with no knees. A singular through dovetail exists on the south elevation second floor plate. The east and west elevation sill logs are half lapped, with no corresponding foundation disruptions.

The second floor walls of section A, are fabricated with dimensioned circular sawn studs. The second floor ceiling joists, rafters, plates and sheathing of section A, are dimensioned, circular sawn lumber.

The sill and second floor plates of section A, are hand hewn, continuous beams. The crawl space and first floor ceiling joists of section A, are ratchet sawn. The crawl space joists are mortised into the sill plate, while the ceiling joist are notched through the second floor plate.

Three ratchet sawn ceiling joist overhangs with nail patterns indicating cornice, soffit and rafter plate were discovered in Room #3.

#### Framing (Section B)

The cellar and crawl floor joists, first and second floor ceiling joists, studs, rafters, sheathing, and plates of section B are dimensioned circular sawn lumber.

The sill plates of section B are hand hewn, with dimensioned studs inlet into them.

#### Exterior

The entire structure is covered with circular sawn board siding. In section B, the siding is attached, with cut nails, to dimensioned circular sawn studs. Nail patterns indicate that the siding was installed when the stud walls were erected. In section A, the siding is attached to ratchet sawn studs and braces, and circular sawn dimensioned studs. However nail patterns indicate that the siding was applied at the same time the circular sawn, dimensioned stud infills were attached to the ratchet sawn beams. Nail patterns on the ratchet sawn studs, of section A indicate only one previous siding application. No pieces of siding which match this nail pattern were discovered.

Nail patterns indicate that all present cornice and trim on sections A & B are initial applications.

#### Roofing:

Nail patterns indicate that the present standing seam roof was attached when the present circular sawn sheathing, dimensioned rafters and studs were installed.

No evidence of pre-20th century roofing material was discovered.

#### Fenestration

The existing windows, in section A & B, are fastened to dimensioned circular sawn studs. The circular sawn studs were spaced to accommodate the installation of the existing windows.

All windows are 2/2 with the exception of a 6/6 sash on the south, second floor elevation of section A. The 6/6 sash frame is attached to dimensioned, circular sawn studs. All sash exhibit circular sawn and planer marks.

No windows were found that pre-dated the existing windows. No window openings were found that pre-dated the present openings. No mortise pockets were discovered to indicate former openings. Installation of present sash obliterated any trace of pre-20th century sash.

### Interior:

#### Walls:

A small section, 3' x 3' of riven lath remains in place over the west wall doorway of the interior partition in section A. The lath is nailed to ratchet sawn studs with hand wrought four strike lath nails. (Riven lathe was commonly used before 1850, however could have been used until the use of circular sawn lathe became common in the 20th century.) The remainder of the walls, in section A are covered with circular sawn lath.

The ratchet sawn studs show no evidence of whitewash nor do they show evidence of exposure due to lack of covering. Nail patterns on the ratchet sawn studs in section A, indicate that riven lath was the only wall treatment until the present circular sawn lath was installed.

The interior walls of section B, are covered with circular sawn lath nailed to dimensioned, circular sawn studs. No nail patterns that indicate later lath applications were discovered.

#### Framing:

The studs of the interior partition on the first floor of section A are ratchet sawn. The first floor joist to which the partition joists are mortised is wider than the remaining joists. The opening in the interior wall shows a ghost of riven plaster lathe and door trim. Existing riven plaster lath indicates door trim, and the two framing studs on either side of the opening are wider (8") than the remainder of the studs(4").

The present trim around the interior, west elevation door of section A, exhibits a hand planed bead similar to the bead on the covered stair way paneling in the room # 2. However, the trim is fastened to dimensioned, circular sawn lumber, with wire nails.

### Stairway

The stairway paneling, framing, risers and treads in room #2 were installed at the same time the framing of first floor section A was completed. The paneling was nailed with four strike nails to



the ratchet sawn first floor ceiling joist. (Four strike nails are wrought iron nails that were fabricated by hand with four strikes of a hammer on the head of the nail. Use of these nails was common before 1850.) A ratchet sawn stud is mortised on the exterior wall of the south elevation of section A, to fasten the southern end of the paneling. The paneling is nailed to the stud with four strike nails.

Circular sawn plaster lath is infilled into the opening in the partition at the southwest corner of room #1. This lath is nailed with cut nails to eight inch ratchet sawn studs. Two holes were drilled in the paneling at the stair opening in room #2 to allow a saw cut to be made across the top of the paneling. This saw cut allowed the present opening to be cut. Ghosts of tread and riser wear were discovered in room #1 on the random width tongue and groove flooring.

#### Flooring

The random width, ratchet sawn, tongue and groove flooring, on the first and second floors of section A, is attached with hand wrought sprigs to the ratchet sawn joists. (Hand wrought sprigs were finish nails and were commonly used in the 17th, 18th, and 19th century construction.) No other nail patterns were discovered.

The circular sawn, dimensioned tongued and grooved flooring in rooms #1 & #2. is fastened with cut nails to the random width ratchet sawn, tongue and grooved subfloor.

#### Summary of fabric evidence and construction sequence

Although the construction technique and material of the timber framed portion of the house indicated an early 19th century date, the lack of projectiles and projectile holes suggested a construction date after the battle. (Only one dropped minie bullet was discovered in the interior framing of the timber framed structure.)

An archeological dig, by National Capital Region archaeologists, discovered an earlier foundation, of a house that existed during the battle.

#### Post battle construction:

Evidence found during the investigation suggests the timber framed part of the existing structure was hastily constructed after the battle, using early 19th century techniques. The house was constructed because battle damage rendered the original structure unsound. The haste of construction deleted the knees on the west elevation of the timber framed structure. The errant

dovetail on the second floor south elevation plate may have been cut in a timber that was used in the previous structure or from an off-site structure.

Although part of the framing envelope of the post battle timber framed house remains in tact, key architectural features such as window type and location, roof pitch, roofing type and application technique, door type and location, and siding type and width, remain undiscernible at this time. However the following details of the timber framed house are discernible.

The physical evidence strongly suggests that the first floor of section A, was part of a post battle one and one half story timber framed house. The structure was sided and trimmed with cornice and soffit.

The interior of the post battle timber framed structure was divided in to two rooms by the present partition framing between rooms #1 and #2. The present opening in the partition was part of the timber framed construction.

The stairway, in room #2 in it's present location, was part of the post battle timber framed construction. However instead of the present westward turn, the stairs turned to the east.

The interior first floor walls of section A, were plastered. The first floor ceiling joists and the bottom of the second floor flooring in section A, was exposed and whitewashed.

The random width, ratchet sawn tongued and grooved flooring on the first and second floors of section A, was face nailed in place/during post battle construction.

#### Early 20th century expansion:

At the turn of the century, the post battle one and one half story timber framed structure underwent a significant change. The chimney at the east end of the structure, and the upper half story were removed, and a story and one half addition was added. A two and one half story ell was added to the building. All post battle rafters, siding, windows, trim and doors were removed. The second floor joist overhangs of the timber framed structure were cut, save three, and the present siding was installed. In order to install windows, doors and siding, dimensioned stud infills were installed on the north, east and west elevations of the timber framed house. The entire structure was covered with a standing seam roof. The chimneys on the present east and west elevation of the section A were added during the expansion.

A porch of unknown design was constructed on the east elevation of section B.

All post battle plaster and lath was removed, except for a small section in room #2, and the entire interior was lathed and plastered. Any original trim, except for the boxed stairway and some salvaged trim was removed and new trim was installed throughout the expanded house at this time.

Standard dimensioned tongue flooring was used to cover the original flooring in rooms #1 & #2.

The flooring in rooms #5 & #6 was not altered.

### Recommendations

To restore any historic structure, NPS 28 states "Archeological, historical, and architectural data must be sufficient to permit accurate restoration with minimum conjecture."

The architectural data necessary to support accurate restoration of the Douglas Hall to its 1862 appearance is non-existent. The only remaining fabric that ties the present structure with the battle of Groveton is now an inseparable part of the present structure.

The timber framed structure was constructed only because of the result of the battle on Brawner Farm, and could be used as an interpretative aid describing the severity of that battle.

The following preservation treatments were selected from a list of alternatives outlined as possible actions pending results of the investigation.

The alternatives reflect the lack of architectural data necessary to restore Douglas Hall to its 1862 appearance.

All estimates are Class "C".

1) Stabilize existing structure: \$85,000

Considerations: This stabilization would preserve a structure that was not in existence at the time of the battle of Brawner Farm. However, this stabilization will make the building weathertight and secure, and ensure the survival of the only

fabric that is related to the battle of Brawner Farm. Also, the stabilization would allow the building to remain as a site marker.



- 2) Restore existing structure exterior \$150,000

Considerations: This restoration will restore the exterior of the existing structure, and allow the building to remain as a site marker. This alternative would close the interior to public use. No fabric from the timber framed house would be visible, and that fabric is the only fabric related to the battle of Brawner Farm.

- 3) Restore existing exterior and adapt first floor for visitor contact.

a) including restrooms \$265,000

b) no restrooms, electricity only \$200,000

Considerations: This alternative would preserve the structure yet allow a careful interpretation of the remaining fabric of the timber framed house. The structure would remain as a site marker. Employee staffing needs must be considered, in order to plan adequate employee restroom and work areas.

- 4) Restore existing exterior, adapt first floor for visitor contact, adapt second floor for residence.

a) including restrooms, heating,  
and air conditioning \$300,000

Considerations: This option would retain the structure as a site marker and would allow the timber framed portion of the house to be used as an interpretative aid. The conversion of the second floor of the structure to a private residence would require careful planning as to not disrupt the historic scene with additional non-historic period elements.

(Ghosting Paragraphs) from Lisa

- 6) Remove structure and stabilize foundation. \$40,000

This option would remove the structure that was not in existence during the battle of Brawner Farm. However, this option would remove the timber framed structure that could be used as a site marker and as an interpretative aid for the battle of Brawner Farm.